Minutes
Conceptual Models of the Mission Space (CMMS)
Technical Working Group
Meeting 5

1. The fifth meeting of the CMMS technical working group was hosted by DMSO (Defense Modeling and Simulation Office) on 26 April 1996 in Alexandria, VA. Lt Col Mark Jefferson, Chief, Technology Applications Division, DMSO, chaired the meeting. A list of attendees is attached. Briefings will be posted on the DMSO World-Wide Web Home Page under CMMS Meetings.

**Introduction - DMSO**

2. Lt Col Jefferson summarized recent CMMS progress and introduced the first version of the Technical Framework document. Three of its important initial components will begin to help define the way major programs can make mission space description contributions to CMMS. These are its description of Authoritative Data Sources (ADS), its call for Common Semantics and Syntax and the requirements it establishes for the Data Interchange Format (DIF). In ADS, it establishes the need for not just source and authority for descriptions but also information about the methods that were used to produce them. It also includes a foundational discussion of the Common Semantics and Syntax effort that will be needed to support integration and reuse of the descriptions. Finally, it establishes the need for a DIF information exchange mechanism, initially populated with CMMS description conversion tools and Semantics and Syntax data, that can provide common support to all M&S programs.

**CMMS Technical Framework Draft for Comment - Jack Sheehan**

3. Jack Sheehan, Applied Research Laboratories, Univ. of Texas, briefed the draft version of the CMMS Technical Framework. The document was distributed to all attendees as a draft for comments. Most importantly, in the changing world of experimentation and prototyping, it is the one document with a long life, that survives each development effort and collects up lessons learned. Mr. Sheehan conducted a “walk-through” of the document and stressed that significant comments would be needed from all the participants to make the document work. The document is structured with the more mature material in the beginning and the more abstract at the end. The focus of the initial authors in this version was on reserve word definitions, rules for moving data in and releasing it, and a description of the hierarchical mission space of command and control. More robust treatment of these and other aspects of the technical framework will be added in later versions. Such additions will include technical specifications for putting information in CMMS and for storing and accessing it, concrete use cases and a more definitive description of the basic content. The content discussion in this draft version introduces the concept of a recursively reusable mission description consisting of Entities, Actions, Tasks and Interactions (EATI). The EATI concept will be fleshed out and improved through discussion with the major programs and other consultants and its recursive use will be demonstrated.

**Program Updates**

4. Hugh Kelley reported progress on the joint JWARS/JSIMS Mission Space Model. The two efforts had shown signs of divergence because of differences in where each model starts in the Joint Task Force (JTF) life cycle. The JSIMS JMSM (Joint Simulation System Joint Mission Space Model) has been tailored to emphasize the employment (Unified Action) phase, while the JWARS (Joint Warfare System) Mission Space Object Model includes pre-deployment phase (Title 10) information. As the two models begin to be re-merged JSIMS will be better able to take advantage of the JWARS work than vice versa. The JMSM will be based on the Unified Endeavor 95 exercise scenario, which will drive the objects and methods modeled. This scenario is believed to be within the domain engineering effort of JWARS. JSIMS JMSM uses a coordinated Joint Program Office/Development Agent (DA) process for integration of service-specific and multi-service objects with the joint model. This integration process will be basically managed through a series of "stubs" placed in the model indicating DA responsibilities. JSIMS/JWARS are in the process of signing an MOA to develop a common mission space model.

5. Stan Bloyer, Bloyer Associates, briefed progress on STOW SEID's (Synthetic Theater of War System Engineering & Integration Division) Navy CMMS. Mr. Bloyer provided spreadsheet excerpts from an extensive listing of Navy force-level tasks. The SEID is undertaking, in the next 7 months, the integration of much excellent STOW work into a usable Battlespace. Part of this is the integration of synthetic forces and synthetic environments such that entities operate in variable environmental conditions and are affected by them. It is not well settled now whether the result of STOW 97 will be simply a demonstration or an in-place simulation capability. There is still a significant gap between high-level force description and the platform level synthetic forces. The full spread sheets will be available on the STOW Worldwide Web home page.

**Functional Description of the Battlespace (FDB) Brief and Demonstration**

6. Major Frank Rhinesmith, STRICOM (WARSIM) (Simulation, Training and Instrumentation Command (Warrior Simulation) briefed the current version of the FDB and was assisted by Wesley Milks in its demonstration over the Internet. Front-End Analysis is becoming a bigger part of FDB as its construction proceeds. There are significant issues to consider, while building the FDB descriptions, regarding what the data looks like, since everybody uses it differently. The functions demonstrated today shows how the program has tackled some of these issues to date. Fidelity has become a particularly interesting variable, driving somewhat the descriptions and capture of data. The minimum necessary fidelity to satisfy simulation developers must be provided, and not much more, in order to keep ahead of the looming WARSIM deadline. Related to this is the need for characteristics of entities and actions in the FDB to be observable and measurable. Mr. Sheehan noted that observability and measurability need to be part of the next draft of the CMMS Technical Framework. Further progress is evidenced in that the WARSIM developer is now involved, along with other elements of STRICOM, the National Simulation Center as a user representative, and Veda (with IMC assistance) as the FDB builder. While significant portions of the FDB are being built, there are still outstanding technical approach

issues, such as what data is needed and whether some of it could be specific to a simulation. In that sense, a task could be described differently depending on the purpose [whether for model or different fidelity simulations]. From Battalion to Echelons Above Corps, some tasks described may be in both and they may be described in different levels of detail in each appearance (or in each presentation to the FDB user).

**CMMS Technical Framework Draft Comments**

7. Members of the TWG are reminded that comments on the CMMS Technical Framework - Draft for Comments are due in to DMSO NLT 25 May 1996.